



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

**PROCEEDINGS**  
**OF THE**  
**AMERICAN PHILOSOPHICAL SOCIETY,**  
**HELD AT PHILADELPHIA,**  
**FOR**  
**PROMOTING USEFUL KNOWLEDGE.**

---

**VOL. III.**

**No. 27. MAY 25-30, 1843.**

---

**PHILADELPHIA:**  
**PRINTED FOR THE SOCIETY,**  
**By John C. Clark, 60 Dock Street.**  
**1843.**

---

**AMERICAN PHILOSOPHICAL SOCIETY,**

**HELD AT PHILADELPHIA,**

**FOR**

**PROMOTING USEFUL KNOWLEDGE.**

~~~~~  
**CELEBRATION**

**OF THE**

**HUNDREDTH ANNIVERSARY,**

**MAY 25, 1843.**

---

NOTE. By a resolution of the Society, the charge and entire responsibility of the published "Proceedings" are devolved on one of the Secretaries, who acts as Reporter. That officer has been aided however in the present number by several gentlemen, who have furnished him with abstracts of their contributions to the meeting; and he mentions the fact, at once to tender to them his acknowledgments for their courtesy, and to relieve himself from the censure of having compressed some of the most interesting communications within too narrow limits.

*Hall of the American Philosophical }  
Society, September 10, 1843. }*

**OFFICERS**  
OF THE  
**AMERICAN PHILOSOPHICAL SOCIETY,**  
**MAY 25, 1843.**

---

*President.*

Peter S. Du Ponceau, LL.D.

*Vice-Presidents.*

Nathaniel Chapman, M.D.

Robert M. Patterson, M.D.

Franklin Bache, M.D.

*Secretaries.*

John K. Kane,

Alexander Dallas Bache, LL.D.

Robley Dunglison, M.D.

Joshua Francis Fisher.

*Curators.*

John Price Wetherill,

Isaac Hays, M.D.

Franklin Peale.

*Treasurer.*

George Ord.

*Counsellors.*

Robert Hare, M.D.

William Hembel,

Charles D. Meigs, M.D.

Henry Vethake, LL.D.

Clement C. Biddle,

William Short,

Joseph Henry, LL.D.

Benjamin Dorr, D.D.

Thomas Biddle,

Gouverneur Emerson, M.D.

Isaac Lea,

Hartman Kuhn.

# MEMBERS

OF THE

## AMERICAN PHILOSOPHICAL SOCIETY,

MAY 25, 1843,

*With their Original Numbers, and the Dates of their Election.*

---

|                                                              |   |   |   |           |      |
|--------------------------------------------------------------|---|---|---|-----------|------|
| 454. Benjamin Chew, of Pennsylvania,                         | - | - | - | 19 Jan.   | 1787 |
| 504. Ashbel Green, D.D., of Pennsylvania,                    | - | - | - | 16 Jan.   | 1789 |
| 529. James Ross, of Pennsylvania,                            | - | - | - | 21 Jan.   | 1791 |
| 532. Albert Gallatin, of Pennsylvania,                       | - | - | - | 21 Jan.   | 1791 |
| 551. Peter Stephen Du Ponceau, of Pennsylvania,              | - | - | - | 15 July,  | 1791 |
| 559. Anthony Renatus C. M. de la Forest,                     | - | - | - | 20 Jan.   | 1792 |
| 570. John Trumbull, of Connecticut,                          | - | - | - | 20 July,  | 1792 |
| 610. A. I. Larocque, of France,                              | - | - | - | 15 April, | 1796 |
| 618. Charles Caldwell, M.D., of Kentucky,                    | - | - | - | 21 Oct.   | 1796 |
| 624. Samuel Harrison Smith, of the District of Columbia,     |   |   |   | 20 Jan.   | 1797 |
| 630. John Guillemard, of Oxford, England,                    | - | - | - | 21 July,  | 1797 |
| 652. Samuel Miller, D.D., of New Jersey,                     | - | - | - | 18 April, | 1800 |
| 670. William Stephen Jacobs, M.D., of St. Croix,             | - | - | - | 16 July,  | 1802 |
| 672. James Mease, M.D., of Pennsylvania,                     | - | - | - | 16 July,  | 1802 |
| 677. Robert Hare, M.D., of Pennsylvania,                     | - | - | - | 21 Jan.   | 1803 |
| 686. Robert Gilmor, of Maryland,                             | - | - | - | 21 Oct.   | 1803 |
| 690. Manuel Godoy, Prince of Peace,                          | - | - | - | 20 April, | 1804 |
| 691. Pedro Cevallos, of Spain,                               | - | - | - | 20 April, | 1804 |
| 694. William Short, of Virginia,                             | - | - | - | 20 July,  | 1804 |
| 695. Baron Alexander Von Humboldt, of Prussia,               | - | - | - | 20 July,  | 1804 |
| 704. Samuel Moore, M.D., of Pennsylvania,                    | - | - | - | 18 Jan.   | 1805 |
| 706. Benjamin Silliman, M.D., of Connecticut,                | - | - | - | 18 Jan.   | 1805 |
| 712. Joseph Cloud, of Pennsylvania,                          | - | - | - | 17 Jan.   | 1806 |
| 713. Samuel B. Wylie, D.D., of Pennsylvania,                 | - | - | - | 17 Jan.   | 1806 |
| 719. Mahlon Dickerson, of New Jersey,                        | - | - | - | 16 Jan.   | 1807 |
| 721. Nathaniel Chapman, M.D., of Pennsylvania,               | - | - | - | 17 April, | 1807 |
| 723. Ferdinand Rudolph Hassler, of the District of Columbia, |   |   |   | 17 April, | 1807 |
| 726. James Gibson, of Pennsylvania,                          | - | - | - | 17 April, | 1807 |
| 728. Charles Philibert de l'Asteyrie, of France,             | - | - | - | 16 Oct.   | 1807 |
| 730. Horace Binney, of Pennsylvania,                         | - | - | - | 15 July,  | 1808 |

|                                                    |   |   |   |                |
|----------------------------------------------------|---|---|---|----------------|
| 733. Ross Cuthbert, of Lower Canada,               | - | - | - | 20 Jan. 1809   |
| 736. George William Featherstonhaugh, of New York, | - | - | - | 21 April, 1809 |
| 737. David B. Warden, of Paris,                    | - | - | - | 21 April, 1809 |
| 738. Robert M. Patterson, M.D., of Pennsylvania,   | - | - | - | 21 April, 1809 |
| 742. F. André Michaux, of France,                  | - | - | - | 21 April, 1809 |
| 752. John Davis, of Massachusetts,                 | - | - | - | 18 Jan. 1811   |
| 753. Charles J. Wister, of Pennsylvania,           | - | - | - | 18 Jan. 1811   |
| 755. Robert Walsh, of Pennsylvania,                | - | - | - | 17 Jan. 1812   |
| 757. *Robert Adrain, of New Jersey,                | - | - | - | 17 July, 1812  |
| 761. Constant Dumeril, of Paris,                   | - | - | - | 16 April, 1813 |
| 763. John Sergeant, of Pennsylvania,               | - | - | - | 16 April, 1813 |
| 764. Nicholas Biddle, of Pennsylvania,             | - | - | - | 16 April, 1813 |
| 765. William P. C. Barton, M.D., of Pennsylvania,  | - | - | - | 16 Oct. 1813   |
| 766. William Meredith, of Pennsylvania,            | - | - | - | 16 Oct. 1813   |
| 767. Charles Chauncey, of Pennsylvania,            | - | - | - | 16 Oct. 1813   |
| 769. William Hembel, of Pennsylvania,              | - | - | - | 16 Oct. 1813   |
| 773. Frederick Beasley, D.D., of New Jersey,       | - | - | - | 21 Jan. 1814   |
| 775. Gen. Joseph Gardiner Swift,                   | - | - | - | 15 April, 1814 |
| 776. Thomas Gilpin, of Pennsylvania,               | - | - | - | 15 April, 1814 |
| 778. John Gummeré, of New Jersey,                  | - | - | - | 15 July, 1814  |
| 782. John Morin Scott, of Pennsylvania,            | - | - | - | 21 April, 1815 |
| 783. Joseph Hartshorne, M.D., of Pennsylvania,     | - | - | - | 21 April, 1815 |
| 785. Charles Jared Ingersoll, of Pennsylvania,     | - | - | - | 21 April, 1815 |
| 790. Gerhard Troost, M.D., of Tennessee,           | - | - | - | 19 Jan. 1816   |
| 791. Joseph Reed, of Pennsylvania,                 | - | - | - | 19 Jan. 1816   |
| 797. Charles Alexander Le Sueur, of Paris,         | - | - | - | 17 Jan. 1817   |
| 800. John C. Otto, M.D., of Pennsylvania,          | - | - | - | 17 Jan. 1817   |
| 801. Richard Rush, of Pennsylvania,                | - | - | - | 17 Jan. 1817   |
| 805. Joseph Von Hammer, of Vienna,                 | - | - | - | 18 July, 1817  |
| 806. William Gaston, of North Carolina,            | - | - | - | 18 July, 1817  |
| 807. Charles Fenton Mercer, of Virginia,           | - | - | - | 18 July, 1817  |
| 809. Eugenius Nulty, of Pennsylvania,              | - | - | - | 17 Oct. 1817   |
| 811. George Ord, of Pennsylvania,                  | - | - | - | 17 Oct. 1817   |
| 812. Thomas Nuttall, of England,                   | - | - | - | 17 Oct. 1817   |
| 816. John Quincy Adams, of Massachusetts,          | - | - | - | 17 April, 1818 |
| 819. James G. Thomson, of Pennsylvania,            | - | - | - | 17 April, 1818 |
| 820. Parker Cleaveland, of Maine,                  | - | - | - | 17 April, 1818 |
| 821. John C. Warren, M.D., of Massachusetts,       | - | - | - | 17 April, 1818 |
| 822. James Jackson, M.D., of Massachusetts,        | - | - | - | 17 April, 1818 |
| 824. Gottlieb Fischer, of Russia,                  | - | - | - | 17 April, 1818 |

|                                                      |   |   |   |                |
|------------------------------------------------------|---|---|---|----------------|
| 825. Daniel Drake, M.D., of Ohio,                    | - | - | - | 17 April, 1818 |
| 826. Jacob Bigelow, M.D., of Massachusetts,          | - | - | - | 17 April, 1818 |
| 831. H. M. Ducrotay de Blainville, of Paris,         | - | - | - | 15 Jan. 1819   |
| 833. Guillaume Theophile Tilesius,                   | - | - | - | 16 April, 1819 |
| 836. Jacob Perkins, of Massachusetts,                | - | - | - | 18 June, 1819  |
| 839. Alexander Brongniart, of Paris,                 | - | - | - | 15 Oct. 1819   |
| 840. Redmond Conyngham, of Pennsylvania,             | - | - | - | 15 Oct. 1819   |
| 843. William E. Horner, M.D., of Pennsylvania,       | - | - | - | 15 Oct. 1819   |
| 847. Franklin Bache, M.D., of Pennsylvania,          | - | - | - | 21 April, 1820 |
| 848. William Gibson, M.D., of Pennsylvania,          | - | - | - | 21 April, 1820 |
| 849. Samuel F. Jarvis, D.D., of New York,            | - | - | - | 20 Oct. 1820   |
| 850. Isaiah Lukens, of Pennsylvania,                 | - | - | - | 20 Oct. 1820   |
| 851. John Jacob Berzelius, of Sweden,                | - | - | - | 20 Oct. 1820   |
| 852. J. A. Borgnis, of France,                       | - | - | - | 20 Oct. 1820   |
| 854. M. de Montgéry, of France,                      | - | - | - | 20 Oct. 1820   |
| 855. William Strickland, of Pennsylvania,            | - | - | - | 20 Oct. 1820   |
| 856. John Pickering, of Massachusetts,               | - | - | - | 20 Oct. 1820   |
| 857. Langdon Cheves, of South Carolina,              | - | - | - | 19 Jan. 1821   |
| 859. John B. Gibson, of Pennsylvania,                | - | - | - | 19 Jan. 1821   |
| 860. George Alexander Otis, of Massachusetts,        | - | - | - | 20 April, 1821 |
| 861. Clement C. Biddle, of Pennsylvania,             | - | - | - | 20 April, 1821 |
| 864. Peter Azelius, of Sweden,                       | - | - | - | 20 April, 1821 |
| 865. Sir James Wiley, of St. Petersburg,             | - | - | - | 20 April, 1821 |
| 866. Gustavus, Count Wetterstedt, of Sweden,         | - | - | - | 20 July, 1821  |
| 869. Peter Poletica, of Russia,                      | - | - | - | 18 Jan. 1822   |
| 870. P. Pedersen, of Denmark,                        | - | - | - | 18 Jan. 1822   |
| 873. Richard Harlan, M.D., of Pennsylvania,          | - | - | - | 19 April, 1822 |
| 875. Jóns Svanberg, of Sweden,                       | - | - | - | 19 April, 1822 |
| 880. Lardner Vanuxem, of Pennsylvania,               | - | - | - | 18 Oct. 1822   |
| 884. Samuel Jackson, M.D., of Pennsylvania,          | - | - | - | 17 Jan. 1823   |
| 885. Benjamin H. Coates, M.D., of Pennsylvania,      | - | - | - | 18 April, 1823 |
| 886. James Fenimore Cooper, of New York,             | - | - | - | 18 April, 1823 |
| 889. Joseph, Count Surveilliers,                     | - | - | - | 18 April, 1823 |
| 891. H. C. Schumacher, of Denmark,                   | - | - | - | 18 April, 1823 |
| 892. William Darlington, M.D., of Pennsylvania,      | - | - | - | 18 April, 1823 |
| 893. William Bengo Collyer, of England,              | - | - | - | 18 April, 1823 |
| 895. Stephen H. Long, U. S. Topographical Engineers, | - | - | - | 17 Oct. 1823   |
| 897. Nathaniel A. Ware, of Pennsylvania,             | - | - | - | 17 Oct. 1823   |
| 899. Moses Stuart, D.D., of Massachusetts,           | - | - | - | 16 Jan. 1824   |
| 900. Henry Seybert, of Pennsylvania,                 | - | - | - | 16 Jan. 1824   |
| 904. A. I. Von Krusenstern, of Russia,               | - | - | - | 16 April, 1824 |



|                                                        |       |                |
|--------------------------------------------------------|-------|----------------|
| 905. Charles Lucien Bonaparte, Prince of Canino, &c.   | -     | 16 April, 1824 |
| 906. Conrad I. Temminck, of Leyden,                    | - -   | 16 July, 1824  |
| 909. Count John Laval, of Russia,                      | - - - | 21 Jan. 1825   |
| 910. John I. Bigsby, M.D., of England,                 | - -   | 21 Jan. 1825   |
| 911. M. Flourens, M.D., of Paris,                      | - - - | 15 April, 1825 |
| 914. John K. Kane, of Pennsylvania,                    | - -   | 15 April, 1825 |
| 916. Charles N. Bancker, of Pennsylvania,              | - -   | 15 April, 1825 |
| 919. Joseph R. Ingersoll, of Pennsylvania,             | - -   | 15 July, 1825  |
| 921. Philip Tidyman, M.D., of South Carolina,          | -     | 21 Oct. 1825   |
| 922. Samuel Humphreys, of Pennsylvania,                | - -   | 20 Jan. 1826   |
| 925. Charles D. Meigs, M.D., of Pennsylvania,          | -     | 21 April, 1826 |
| 926. William M'Ilvaine, of Pennsylvania,               | - -   | 21 April, 1826 |
| 927. Jacopo Graberg di Hemso, of Sweden,               | -     | 21 April, 1826 |
| 928. Henry De Struvé, of Russia,                       | - -   | 20 Oct. 1826   |
| 929. Lewis Cass, of Michigan,                          | - - - | 20 Oct. 1826   |
| 932. Joel R. Poinsett, of South Carolina,              | - -   | 19 Jan. 1827   |
| 933. René La Roche, M.D. of Pennsylvania,              | -     | 19 Jan. 1827   |
| 934. John Price Wetherill, of Pennsylvania,            | -     | 20 April, 1827 |
| 935. George Emlen, of Pennsylvania,                    | - -   | 20 April, 1827 |
| 937. Marcus Bull, of Pennsylvania,                     | - - - | 20 April, 1827 |
| 939. Dr. George Maria Zecchinelli, of Padua,           | -     | 20 April, 1827 |
| 940. J. P. C. Cassado de Giraldes, of Portugal,        | -     | 20 July, 1827  |
| 942. John K. Mitchell, M.D., of Pennsylvania,          | -     | 20 July, 1827  |
| 944. *Noah Webster, of Connecticut,                    | - -   | 19 Oct. 1827   |
| 947. Thomas Harris, M.D., of Pennsylvania,             | -     | 18 Jan. 1828   |
| 948. Robert Eglesfeld Griffith, M.D., of Pennsylvania, | -     | 18 Jan. 1828   |
| 950. Samuel George Morton, M.D., of Pennsylvania,      | -     | 18 Jan. 1828   |
| 951. Adm. Jose Maria Dantes Pereira, of Portugal,      | - -   | 18 April, 1828 |
| 952. Henry James Anderson, M.D., of New York,          | -     | 18 April, 1828 |
| 953. Isaac Lea, of Pennsylvania,                       | - - - | 18 April, 1828 |
| 954. Samuel Betton, M.D., of Pennsylvania,             | -     | 18 July, 1828  |
| 955. George Ticknor, of Massachusetts,                 | - -   | 18 July, 1828  |
| 956. James Renwick, of New York,                       | - -   | 17 Oct. 1828   |
| 957. Thomas Biddle, of Pennsylvania,                   | - -   | 16 Jan. 1829   |
| 958. William H. De Lancey, D.D., of New York,          | -     | 16 Jan. 1829   |
| 959. Hans Christian Oersted, of Denmark,               | - -   | 16 Jan. 1829   |
| 960. Baron Hyde de Neuville, of France,                | - -   | 16 Jan. 1829   |
| 961. Carls Christian Rafn, of Denmark,                 | - -   | 16 Jan. 1829   |
| 962. Henry Wheaton, of New York,                       | - -   | 16 Jan. 1829   |

\* Died May 28, 1843.

|                                                          |   |   |                |
|----------------------------------------------------------|---|---|----------------|
| 963. Alexander Dallas Bache, of Pennsylvania,            | - | - | 17 April, 1829 |
| 965. James Kent, of New York,                            | - | - | 17 April, 1829 |
| 966. Josiah Quincy, of Massachusetts,                    | - | - | 17 April, 1829 |
| 967. Washington Irving, of New York,                     | - | - | 17 April, 1829 |
| 970. Col. J. N. B. Von Abrahamson, of Denmark,           | - | - | 17 July, 1829  |
| 971. George B. Wood, M.D., of Pennsylvania,              | - | - | 17 July, 1829  |
| 973. Francisco de Paula Quadrado, of Spain,              | - | - | 16 Oct. 1829   |
| 974. M. Jomard, of Paris,                                | - | - | 16 Oct. 1829   |
| 975. Henry S. Tanner, of Pennsylvania,                   | - | - | 16 Oct. 1829   |
| 976. Daniel B. Smith, of Pennsylvania,                   | - | - | 16 Oct. 1829   |
| 977. Thomas Horsfield, M.D., of London,                  | - | - | 16 Oct. 1829   |
| 980. William Yarrel, of England,                         | - | - | 15 Jan. 1830   |
| 982. Jules de Wallenstein, of Russia,                    | - | - | 15 Jan. 1830   |
| 983. Thomas McEuen, M.D., of Pennsylvania,               | - | - | 15 Jan. 1830   |
| 984. Duke Bernard of Saxe Weimar,                        | - | - | 16 April, 1830 |
| 985. William B. Hodgson, of Virginia,                    | - | - | 16 April, 1830 |
| 986. Isaac Hays, M.D., of Pennsylvania,                  | - | - | 16 April, 1830 |
| 988. William Vaughan, of London,                         | - | - | 16 April, 1830 |
| 989. Thomas I. Wharton, of Pennsylvania,                 | - | - | 16 July, 1830  |
| 990. Lorenzo Martini, of Turin,                          | - | - | 15 Oct. 1830   |
| 991. Andres del Rio, of Mexico,                          | - | - | 15 Oct. 1830   |
| 992. Marc Antoine Jullien, of France,                    | - | - | 15 Oct. 1830   |
| 994. Hyacinth Carena, of Turin,                          | - | - | 21 Jan. 1831   |
| 995. Louis Philippe, King of the French,                 | - | - | 21 Jan. 1831   |
| 996. Thomas P. Jones, M.D., of the District of Columbia, | - | - | 21 Jan. 1831   |
| 997. Henry Vethake, of Pennsylvania,                     | - | - | 15 April, 1831 |
| 999. Edward Everett, of Massachusetts,                   | - | - | 15 April, 1831 |
| 1000. Louis M'Lane, of Delaware,                         | - | - | 15 April, 1831 |
| 1001. William C. Rives, of Virginia,                     | - | - | 15 April, 1831 |
| 1002. Alexander Everett, of Massachusetts,               | - | - | 15 April, 1831 |
| 1003. Martin Fernandez Navarrete, of Spain,              | - | - | 15 July, 1831  |
| 1005. John James Audubon, of New York,                   | - | - | 15 July, 1831  |
| 1006. Maj. Hartman Bache, U. S. Topographical Engineers, |   |   | 21 Oct. 1831   |
| 1008. Julius D. Ducatel, M.D., of Maryland,              | - | - | 20 Jan. 1832   |
| 1009. Henry D. Gilpin, of Pennsylvania,                  | - | - | 20 Jan. 1832   |
| 1011. John Bell, M.D., of Pennsylvania,                  | - | - | 20 Jan. 1832   |
| 1012. Robley Dunglison, M.D., of Pennsylvania,           | - | - | 20 Jan. 1832   |
| 1013. Steen Bille, of Denmark,                           | - | - | 20 Jan. 1832   |
| 1014. Thomas Sergeant, of Pennsylvania,                  | - | - | 20 Jan. 1832   |
| 1015. Theodore Lorin, of France,                         | - | - | 20 April, 1832 |
| 1016. Hugh L. Hodge, M.D., of Pennsylvania,              | - | - | 20 April, 1832 |

|                                                          |       |                |
|----------------------------------------------------------|-------|----------------|
| 1017. Col. John J. Abert, U. S. Topographical Engineers, | -     | 20 April, 1832 |
| 1018. Juan Jose Martinez, of Spain,                      | - - - | 20 April, 1832 |
| 1020. E. S. Bring, of Sweden,                            | - - - | 20 July, 1832  |
| 1021. Professor Bujalsky, of Russia,                     | - - - | 18 Jan. 1833   |
| 1022. Marmaduke Burrow, M.D., of Pennsylvania,           | - - - | 18 Jan. 1833   |
| 1023. Matthias W. Baldwin, of Pennsylvania,              | - - - | 18 Jan. 1833   |
| 1024. Edwin James, M.D., of New York,                    | - - - | 18 Jan. 1833   |
| 1025. Moncure Robinson, of Virginia,                     | - - - | 18 Jan. 1833   |
| 1026. M. J. Labouderie, of France,                       | - - - | 19 April, 1833 |
| 1027. Charles Nagy, of Hungary,                          | - - - | 19 April, 1833 |
| 1028. Jacob Randolph, M.D., of Pennsylvania,             | - - - | 19 April, 1833 |
| 1029. Joshua Francis Fisher, of Pennsylvania,            | - - - | 19 April, 1833 |
| 1030. Gouverneur Emerson, M.D., of Pennsylvania,         | - - - | 19 April, 1833 |
| 1031. Henry C. Carey, of Pennsylvania,                   | - - - | 19 April, 1833 |
| 1032. Henry R. Schoolcraft, of Michigan,                 | - - - | 19 July, 1833  |
| 1033. Viscount Santarem, of Portugal,                    | - - - | 19 July, 1833  |
| 1034. Titian R. Peale, of Pennsylvania,                  | - - - | 19 July, 1833  |
| 1035. Franklin Peale, of Pennsylvania,                   | - - - | 18 Oct. 1833   |
| 1036. Samuel Vaughan Merrick, of Pennsylvania,           | - - - | 18 Oct. 1833   |
| 1037. Henry J. Williams, of Pennsylvania,                | - - - | 18 Oct. 1833   |
| 1038. Henry D. Rogers, of Pennsylvania,                  | - - - | 2 Jan. 1835    |
| 1039. James P. Espy, of Pennsylvania,                    | - - - | 2 Jan. 1835    |
| 1040. Edward H. Courtenay, of Pennsylvania,              | - - - | 2 Jan. 1835    |
| 1041. Charles W. Short, M.D., of Kentucky,               | - - - | 2 Jan. 1835    |
| 1042. John Brockenbrough, of Virginia,                   | - - - | 2 Jan. 1835    |
| 1044. John Torrey, M.D., of New York,                    | - - - | 2 Jan. 1835    |
| 1045. Joseph Henry, of New Jersey,                       | - - - | 2 Jan. 1835    |
| 1046. D. Francis Condie, M.D., of Pennsylvania,          | - - - | 2 Jan. 1835    |
| 1048. William B. Rogers, of Virginia,                    | - - - | 17 July, 1835  |
| 1049. Thomas Sully, of Pennsylvania,                     | - - - | 17 July, 1835  |
| 1050. Charles A. Agardh, of Sweden,                      | - - - | 17 July, 1835  |
| 1051. C. C. Von Leonhard, of Heidelberg,                 | - - - | 15 Jan. 1836   |
| 1052. C. G. C. Reinwardt, of Leyden,                     | - - - | 15 Jan. 1836   |
| 1053. D. Manuel Naxera, of Mexico,                       | - - - | 15 Jan. 1836   |
| 1054. Chevalier Morelli, of Naples,                      | - - - | 15 Jan. 1836   |
| 1055. Job R. Tyson, of Pennsylvania,                     | - - - | 15 Jan. 1836   |
| 1056. Nathan Dunn, of Pennsylvania,                      | - - - | 15 Jan. 1836   |
| 1057. John Griscom, of Pennsylvania,                     | - - - | 15 Jan. 1836   |
| 1058. J. S. Da Costa Macedo, of Portugal,                | - - - | 15 April, 1836 |
| 1059. Nicholas Carlisle, of London,                      | - - - | 15 April, 1836 |

|       |                                                  |   |   |   |                |
|-------|--------------------------------------------------|---|---|---|----------------|
| 1060. | Granville Penn, of England,                      | - | - | - | 15 April, 1836 |
| 1061. | Col. Joseph G. Totten, U. S. Engineers,          | - | - | - | 21 Oct. 1836   |
| 1062. | M. Roux de Rochelle, of France,                  | - | - | - | 21 Oct. 1836   |
| 1063. | Dr. Mariano Galvez, of Guatemala,                | - | - | - | 21 Oct. 1836   |
| 1065. | George Campbell, of Pennsylvania,                | - | - | - | 21 April, 1837 |
| 1066. | John Green Crosse, of England,                   | - | - | - | 21 April, 1837 |
| 1067. | Jared Sparks, of Massachusetts,                  | - | - | - | 21 April, 1837 |
| 1068. | Charles R. Leslie, of London,                    | - | - | - | 21 April, 1837 |
| 1069. | James Cowles Pritchard, M.D., of England,        | - | - | - | 21 April, 1837 |
| 1071. | George Tucker, of Virginia,                      | - | - | - | 21 April, 1837 |
| 1072. | William Jenks, D.D., of Massachusetts,           | - | - | - | 21 July, 1837  |
| 1073. | Sears C. Walker, of Pennsylvania,                | - | - | - | 20 Oct. 1837   |
| 1074. | Joseph Saxton, of Pennsylvania,                  | - | - | - | 20 Oct. 1837   |
| 1075. | William Morris Meredith, of Pennsylvania,        | - | - | - | 20 Oct. 1837   |
| 1076. | Thomas Dunlap, of Pennsylvania,                  | - | - | - | 20 Oct. 1837   |
| 1077. | Daniel Webster, of Massachusetts,                | - | - | - | 20 Oct. 1837   |
| 1078. | Capt. Andrew Talcott, late U. S. Engineers,      | - | - | - | 19 Jan. 1838   |
| 1080. | Charles G. B. Daubeny, M.D., of Oxford, England, | - | - | - | 19 Jan. 1838   |
| 1081. | Henry Reed, of Pennsylvania,                     | - | - | - | 19 Jan. 1838   |
| 1082. | William Norris, of Pennsylvania,                 | - | - | - | 19 Jan. 1838   |
| 1084. | William Harris, M.D., of Pennsylvania,           | - | - | - | 20 April, 1838 |
| 1085. | Robert Treat Paine, of Massachusetts,            | - | - | - | 20 April, 1838 |
| 1087. | *Hugh S. Legaré, of South Carolina,              | - | - | - | 20 April, 1838 |
| 1088. | Samuel Breck, of Pennsylvania,                   | - | - | - | 20 April, 1838 |
| 1089. | Col. Sylvanus Thayer, U. S. Engineers,           | - | - | - | 20 April, 1838 |
| 1090. | Francis Wayland, D.D., of Rhode Island,          | - | - | - | 20 April, 1838 |
| 1091. | Henry Baldwin, of Pennsylvania,                  | - | - | - | 20 April, 1838 |
| 1092. | William H. Prescott, of Massachusetts,           | - | - | - | 20 April, 1838 |
| 1094. | John Edwards Holbrook, M.D., of South Carolina,  | - | - | - | 18 Jan. 1839   |
| 1095. | John C. Cresson, of Pennsylvania,                | - | - | - | 18 Jan. 1839   |
| 1096. | James C. Booth, of Pennsylvania,                 | - | - | - | 18 Jan. 1839   |
| 1097. | Edward Coles, of Pennsylvania,                   | - | - | - | 18 Jan. 1839   |
| 1098. | J. F. Encke, of Berlin,                          | - | - | - | 18 Jan. 1839   |
| 1099. | A. Quetelet, of Brussels,                        | - | - | - | 18 Jan. 1839   |
| 1100. | Humphrey Lloyd, D.D., of Dublin,                 | - | - | - | 19 April, 1839 |
| 1101. | James K. Paulding, of New York,                  | - | - | - | 19 April, 1839 |
| 1102. | John Ludlow, D.D., of Pennsylvania,              | - | - | - | 19 April, 1839 |
| 1103. | Benjamin W. Richards, of Pennsylvania,           | - | - | - | 19 April, 1839 |
| 1104. | George W. Bethune, D.D., of Pennsylvania,        | - | - | - | 19 April, 1839 |
| 1105. | George M. Justice, of Pennsylvania,              | - | - | - | 19 April, 1839 |

|                                                             |   |   |                |
|-------------------------------------------------------------|---|---|----------------|
| 1106. T. Romeyn Beck, M.D., of New York,                    | - | - | 19 July, 1839  |
| 1107. Richard C. Taylor, of Pennsylvania,                   | - | - | 19 July, 1839  |
| 1108. Thomas U. Walter, of Pennsylvania,                    | - | - | 18 Oct. 1839   |
| 1109. John Penington, of Pennsylvania,                      | - | - | 18 Oct. 1839   |
| 1111. Charles Rümker, of Hamburg,                           | - | - | 18 Oct. 1839   |
| 1112. Capt. John Washington, R. N.                          | - | - | 18 Oct. 1839   |
| 1113. Rev. Charles Gutzlaff, of Macao,                      | - | - | 18 Oct. 1839   |
| 1114. Prof. Elias Loomis, of Ohio,                          | - | - | 18 Oct. 1839   |
| 1115. Prof. Stephen Alexander, of New Jersey,               | - | - | 18 Oct. 1839   |
| 1116. Judah Dobson, of Pennsylvania,                        | - | - | 17 Jan. 1840   |
| 1117. John Forbes, M.D., of England,                        | - | - | 17 Jan. 1840   |
| 1118. Michael Faraday, of London,                           | - | - | 17 Jan. 1840   |
| 1119. C. R. Demmé, D.D., of Pennsylvania,                   | - | - | 17 Jan. 1840   |
| 1120. John J. Vanderkemp, of Pennsylvania,                  | - | - | 17 Jan. 1840   |
| 1121. Rev. Philip Milledoler, of New Jersey,                | - | - | 17 Jan. 1840   |
| 1122. Pedro de Angelis, of Buenos Ayres,                    | - | - | 17 Jan. 1840   |
| 1123. Isaac Wayne, of Pennsylvania,                         | - | - | 17 Jan. 1840   |
| 1124. Samuel D. Ingham, of Pennsylvania,                    | - | - | 17 Jan. 1840   |
| 1125. George M. Dallas, of Pennsylvania,                    | - | - | 17 Jan. 1840   |
| 1126. Martin H. Boyè, of Pennsylvania,                      | - | - | 17 Jan. 1840   |
| 1127. Hartman Kuhn, of Pennsylvania,                        | - | - | 17 April, 1840 |
| 1128. F. W. Bessel, of Prussia,                             | - | - | 17 April, 1840 |
| 1130. Rev. William H. Furness, of Pennsylvania,             | - | - | 17 April, 1840 |
| 1131. Capt. Francis Beaufort, of London,                    | - | - | 17 April, 1840 |
| 1132. Paul Beck Goddard, M.D., of Pennsylvania,             | - | - | 17 April, 1840 |
| 1133. Prof. William H. C. Bartlett, of the U. S. Mil. Acad. | - | - | 17 April, 1840 |
| 1134. George M. Wharton, of Pennsylvania,                   | - | - | 17 April, 1840 |
| 1135. George Washington Smith, of Pennsylvania,             | - | - | 17 April, 1840 |
| 1136. Robert Were Fox, of England,                          | - | - | 17 July, 1840  |
| 1137. John Sanderson, of Pennsylvania,                      | - | - | 17 July, 1840  |
| 1138. Francisco Martinez de la Rosa, of Spain,              | - | - | 17 July, 1840  |
| 1139. Major James D. Graham, U. S. Topog. Engineers,        | - | - | 17 July, 1840  |
| 1140. J. B. B. Eyries, of Paris,                            | - | - | 17 July, 1840  |
| 1142. François P. G. Guizot, of France,                     | - | - | 16 Oct. 1840   |
| 1143. Chev. Bernardo Quaranta, of Naples,                   | - | - | 15 Jan. 1841   |
| 1144. David Irvin, of Wisconsin,                            | - | - | 15 Jan. 1841   |
| 1145. Adolph C. P. Callisen, of Denmark,                    | - | - | 15 Jan. 1841   |
| 1146. William Rawle, of Pennsylvania,                       | - | - | 15 Jan. 1841   |
| 1147. Benjamin Dorr, D.D., of Pennsylvania,                 | - | - | 15 Jan. 1841   |
| 1148. John L. Stephens, of New York,                        | - | - | 15 Jan. 1841   |
| 1149. Tobias Wagner, of Pennsylvania,                       | - | - | 15 Jan. 1841   |

|                                                     |   |   |                |
|-----------------------------------------------------|---|---|----------------|
| 1150. Lieut. Col. Edward Sabine, British Army,      | - | - | 16 April, 1841 |
| 1152. Rev. Roswell Park, of Pennsylvania,           | - | - | 16 April, 1841 |
| 1153. Robert Christison, M.D., of Edinburgh,        | - | - | 16 April, 1841 |
| 1154. Prof. Edward Hitchcock, of Massachusetts,     | - | - | 16 April, 1841 |
| 1155. William Peter, of England,                    | - | - | 16 April, 1841 |
| 1157. George Bancroft, of Massachusetts,            | - | - | 16 July, 1841  |
| 1158. Alexis de Tocqueville, of Paris,              | - | - | 21 Jan. 1842   |
| 1159. Baron de Roenné, of Prussia,                  | - | - | 21 Jan. 1842   |
| 1160. John F. Frazer, of Pennsylvania,              | - | - | 21 Jan. 1842   |
| 1161. E. Otis Kendall, of Pennsylvania,             | - | - | 21 Jan. 1842   |
| 1162. Charles Lyell, of London,                     | - | - | 21 Jan. 1842   |
| 1163. *J. N. Nicollet, of the District of Columbia, | - | - | 21 Jan. 1842   |
| 1164. Baron de Ladoucette, of France,               | - | - | 21 Jan. 1842   |
| 1165. E. W. Brayley, of London,                     | - | - | 21 Jan. 1842   |
| 1166. Stephen Endlicher, of Vienna,                 | - | - | 15 April, 1842 |
| 1167. D. Humphreys Storer, M.D., of Massachusetts,  | - | - | 15 April, 1842 |
| 1168. Simeon Borden, of Massachusetts,              | - | - | 15 April, 1842 |
| 1169. Petty Vaughan, of London,                     | - | - | 15 July, 1842  |
| 1170. Frederick Fraley, of Pennsylvania,            | - | - | 15 July, 1842  |
| 1171. Rev. George Peacock, of England,              | - | - | 21 Oct. 1842   |
| 1172. J. I. Clark Hare, of Pennsylvania,            | - | - | 21 Oct. 1842   |
| 1173. Prof. Benjamin Peirce, of Massachusetts,      | - | - | 21 Oct. 1842   |
| 1174. Leopold II. Grand Duke of Tuscany,            | - | - | 20 Jan. 1843   |
| 1175. Louis Agassiz, of Neufchatel,                 | - | - | 20 Jan. 1843   |
| 1176. William W. Gerhard, M.D., of Pennsylvania,    | - | - | 20 Jan. 1843   |
| 1177. Lieut. Col. William Reid, of Bermuda,         | - | - | 20 Jan. 1843   |
| 1178. Thomas P. Cope, of Pennsylvania,              | - | - | 20 Jan. 1843   |
| 1179. John Lenthall, of Pennsylvania,               | - | - | 20 Jan. 1843   |
| 1180. Solomon W. Roberts, of Pennsylvania,          | - | - | 20 Jan. 1843   |
| 1181. Ellwood Morris, of Pennsylvania,              | - | - | 20 Jan. 1843   |
| 1182. Charles Ellett, of Pennsylvania,              | - | - | 20 Jan. 1843   |
| 1183. Charles B. Trego, of Pennsylvania,            | - | - | 20 Jan. 1843   |
| 1184. Chevalier Mustoxidi, of Corfu,                | - | - | 20 Jan. 1843   |
| 1185. Capt. Charles Wilkes, U. S. Navy,             | - | - | 21 April, 1843 |
| 1186. Charles M'Euen, of Pennsylvania,              | - | - | 21 April, 1843 |

\* The intelligence of Mr. Nicollet's death reaches Philadelphia as these pages are issuing from the press.

# INDEX.

---

- Alexander, Prof. S., on phenomena of eclipses, 183.  
Alkaline carbonates, Prof. Draper on decomposition of, 111.  
Association, British, invitation from, 38.  
Atmosphere, Prof. Bache's observations on, 90.  
Atmospheric air, Mr. Espy on law of cooling, by diminished pressure, 155.
- Bache, Prof., reports, 37; reads Loomis' paper, 50; observations at Girard College Observatory, 90; describes his thermoscope of contact, 132; on magnetic disturbances, 175; reports, 210.  
Bancroft, Mr., communicates letters of Franklin, 167.  
Bartlett, Prof., on Observatory at West Point, 151.  
Bartlett, Prof., on Comet of 1842, 152.  
Beck, Dr. C. F., his microscope examined, 138.  
Biddle, Mr. T., on old debt of Pennsylvania, 64.  
Blind, Pennsylvania Institution for, &c., visited, 38.  
Booth, Prof., reads Mr. Espy's paper, 155.  
Booth, Prof., reads Mr. Lea's paper, 162.  
Borden, Mr., geodesic results from survey of Massachusetts, 130.  
Boyé, Mr., on hippuric acid from benzoic, 129.  
Breck, Mr., on continental money, 57.
- Carbonic acid, Prof. Draper on decomposition of, 111.  
Chapman, V. P., opens special meeting, 37.  
Chapman, V. P., closes special meeting, 210.  
Coates, Dr. B. H., on gloomy imprisonment, 143.  
Comet of 1843, Walker and Kendall on, 67.  
Comet of 1843, Prof. Bartlett on, 151.  
Comets, tails of, Prof. Norton on, 108.  
Continental money, Mr. Breck on, 57.  
Coprolites, Mr. Lea on, 143.  
Correspondence read, 37, 38, 115, 151.  
Currents, Mr. Redfield on, 86.  
Cyanosis, Dr. Meigs on, 174.
- Discourse at anniversary meeting, 3.  
Draper, Prof., on decomposition of carbonic acid, &c., 111.  
Ducatel, Prof., on the physical geography, &c., of Maryland, 157.  
Du Ponceau, President, address of, 1.

Earthquakes, Profs. Rogers on, 64.  
 Eclipses, Prof. S. Alexander on, 183.  
 Emanation, phosphorogenic, Prof. Henry on, 38.  
 Emerson, Dr., on Godfrey's monument, 150.  
 Emerson, Dr., reads Dr. Mower's paper, &c., 158.  
 Espy, Mr., on law of cooling air by diminished pressure, 155.  
 Ethnography, Dr. Morton on Egyptian, 115.

Fœtal cranium, Dr. Meigs on, 127.  
 Fossil shells, Mr. H. C. Lea on certain, 162.  
 Franklin, unpublished letters of, 168.  
 Frazer, Prof., reads Prof. Strong's papers, 49, 138.

Geodesic results from Massachusetts survey, Mr. Borden on, 130.  
 Goddard, Dr. P. B., on photography, 179.  
 Godfrey's monument, Dr. Emerson on, 150.  
 Gilliss, Lieut., on Observatory at Washington, 85.  
 Gilpin's, Mr. H. D., memoir of Livingston, 92.

Hare, Dr., on theories of storms, 56.  
 Hays, Dr., on proboscidea, 44.  
 Henry, Prof., on phosphorogenic emanation, 38.  
 Henry, Prof., on water spouts, 137.  
 Henry, Prof., on mode of determining velocities of projectiles, 165.  
 Hippuric acid from benzoic, Mr. Boyé on, 129.  
 Horner, Dr., on microscope, 89.

Imprisonment, Dr. Coates on gloomy, 143.

Lavender, Capt., on water spouts, 134.  
 Lea, Mr. I. on coprolites, 143.  
 Lea, Mr. H. C., on certain new fossil shells, &c., 162.  
 Lenthall, Mr., on launch of ship Pennsylvania, 103.  
 Livingston, E., Mr. Gilpin's notice of, 92.  
 Livingston, Chancellor, letters of, 105, 106.  
 Locke, Dr. Jno., on cross hairs of telescope, 102.  
 Loomis, Prof., on storms, 50.  
 Ludlow, Rev. Dr., prayer by, 2.

Kendall, Prof., on comet of 1843, 67.  
 Kendall, Prof., supplementary letter from, 78.

Magnetic elements, Prof. Bache's observations of, 90.  
 Magnetic disturbances, Prof. Bache on certain, 175.  
 Maryland, its physical geography, &c., by Prof. Ducatel, 157.  
 Massachusetts survey, results from, 130.  
 Meeting, special, members at, 36.  
 Meeting, special, opened by V. P. Chapman, 37.  
 Meeting, special, first session of, 37.



- Meeting, special, second session of, 57.  
 Meeting, special, third session of, 67.  
 Meeting, special, fourth session of, 102.  
 Meeting, special, fifth session of, 115.  
 Meeting, special, sixth session of, 138.  
 Meeting, special, seventh session of, 151.  
 Meeting, special, eighth session of, 169.  
 Meeting, special, closed by V. P. Chapman, 210.  
 Meigs, Dr., on fetal cranium, 127.  
 Meigs, Dr., on cyanosis neonatorum, 174.  
 Members, list of actual, 220.  
 Meteorological observations, by Dr. Mower, 158.  
 Microscope, Dr. Horner on, 89.  
 Mint United States, visited, 138.  
 Mississippi, sources of, Mr. Nicollet on, 140.  
 Money, continental, Mr. Breck on, 57.  
 Morris, Mr. Ellwood, on the turbine, 169.  
 Morton, Dr., on Egyptian ethnography, 115.  
 Moser's experiments, 179.  
  
 Nicollet, Mr. J. N., on sources of Mississippi, 140.  
 Norton, Prof., on tails of comets, 108.  
  
 Observatory at Washington, Lieut. Gilliss on, 85.  
 Observatory at Girard College, Prof. Bache's observations at, 90.  
 Observatory at High School, visited, 138.  
 Observatory at West Point, Prof. Bartlett on, 151.  
 Officers, list of, 219.  
  
 Patterson, Dr. R. M., his discourse, 3.  
 Pennsylvania debt, Mr. T. Biddle on, 64.  
 Pennsylvania before 1743, Mr. Tyson on, 118.  
 Philadelphia, magnetic observations at, 175.  
 Potter, Prof. A., communicates letters, 104.  
 Proboscidea, family of, Dr. Hays on, 44.  
 Projectiles, Prof. Henry on velocities of, 165.  
  
 Redfield, Mr. W. C., on tides and currents, 86.  
 Report of committee of arrangements, 213.  
 Rogers, Prof. H. D., on earthquakes, 64.  
 Rogers, Prof. H. D., geological notices, 181.  
 Rogers, Prof. W. B., on earthquakes, 64.  
 Rogers, Prof. James, on Moser's experiments, 181.  
 Rümker, Prof., communication from, 38.  
  
 Saxton, Mr. Joseph, on photography, 180.  
 Series, Prof. Strong on transformation of, 138.  
 Ship Pennsylvania, Mr. Lenthall on, 103.  
 Sigillaria, Mr. Taylor on, 149.

- Storms, Prof. Loomis on, 50.  
 Strong, Prof., on analytical trigonometry, 49.  
 Strong, Prof., transformation of series, &c., 138.
- Taylor, Mr. R. C., on water spouts, 136.  
 Taylor, Mr. R. C., on sigillaria, 149.  
 Taylor, Mr. R. C., on the geology of Cuba, 154.  
 Telescope, cross hairs of, Dr. Locke on, 102.  
 Tides, Mr. Redfield on, 86.  
 Toronto, magnetic observations at, 175.  
 Trigonometry, analytical, Prof. Strong on, 49.  
 Turbine, Mr. Morris on the, 169.  
 Tyson, Mr. J. R., on Pennsylvania before 1743, 118.  
 Tyson, Mr. J. R., note to his paper, 211.
- Walker, Mr., on comet of 1843, 67.  
 Walker, Mr., supplementary letter from, 78.  
 Water spouts, Capt. Lavender on, 134.  
 Water spouts, Mr. Taylor on, 136.  
 Water spouts, Prof. Henry on, 137.

---

 ERRATA.

- Page 37, line 8, for *Dr. Bache*, read *Professor Bache*.  
 Page 48, line 9, for *Babinus* read *Bulimus*.  
 Page 153, line 29, read *Feb. 26d.* 6018, and strike out 6018 in line 30.